

Discussion of Eckhof

Claims 17, 20-25 and 28-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Eckhof. This rejection is respectfully traversed. An anticipation rejection requires that each and every element of the claimed invention as set forth in the claim be provided in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. As discussed in detail below, Eckhof does not meet the requirements for an anticipation rejection.

Applicants' claim 17 specifies a method for locking a bone screw to a clamping element. With Applicants' claimed method, a clamping element is provided for stabilizing bone segments. This clamping element has at least two snap catches protruding from a bone-contacting surface of the clamping element and spaced around an edge of a screw hole. A bone screw is provided having a circumferential groove located on a top portion thereof below a screw head, for receipt of the snap catches. The clamping element is positioned on a bone segment to be stabilized and the bone screw is then screwed into the bone segment through the screw hole of the positioned clamping element in an axial direction until the snap catches interlock with the groove of the bone screw to secure the bone screw to the clamping element.

The Examiner has apparently equated the bearing ring 6 of Eckhof with Applicants' claimed clamping element. Applicants respectfully submit that the Examiner has misinterpreted the disclosure of Eckhof. Applicants' claimed clamping element is used for stabilizing bone segments and has a bone contacting surface. The bearing ring 6 of Eckhof is not used to stabilize bone segments. Rather, the bearing ring 6 of Eckhof is inserted into an opening 2 of a bone plate 3 (Col. 3, lines 66-67). It is the bone plate 3 of Eckhof that may be used to stabilize the bone segments. However, this bone plate 3 of Eckhof does not have any snap catches which interlock with a groove in the bone screw 1.

Assuming *arguendo* that the bearing ring 6 of Eckhof could somehow be compared to Applicants' claimed clamping element, it is respectfully submitted that this bearing ring 6 is not equivalent to Applicants' claimed clamping element. In particular, the bearing ring 6 of Eckhof does not have snap catches protruding from a bone contacting surface, but rather a

circumferential groove 16 contained within an expanded interior section 14 of the bearing ring 6.

Further, in Eckhof the step 13 of bearing ring 6 is an annular step (Col. 4, lines 44-47). Such an annular step 13 is not equivalent to the snap catches claimed by Applicants. The at least two snap catches claimed by Applicants protrude from a bone contacting surface of the clamping element and are spaced around an edge of a screw hole of the clamping element. An example of such a snap catch is illustrated, for example, in Applicants' Figures 1 and 2, which shows snap catches 35 protruding from a bone contacting surface 38 of the clamping element 30.

Eckhof does not disclose or remotely suggest providing a clamping element for stabilizing bone segments that has at least two snap catches protruding from a bone-contacting surface of said clamping element and spaced around an edge of a screw hole, as claimed by Applicants. As can be seen from Figure 1 of Eckhof, there are no projections protruding from either the bone contacting surface 5 of the bone plate 3 or from the bearing ring 6.

Further, in Eckhof, the bone screw 1 has a circumferential rib 21 which engages in the annular groove 16 of the bearing ring 6 (Col. 4, lines 55-60). In contrast, with Applicants' claimed invention according to claim 17, the bone screw has a circumferential groove located on a top portion of the screw below the screw head for receipt of said snap catches, and not a rib as set forth in Eckhof.

In addition, the rebounding shoulder 20 of the screw 1 of Eckhof abuts against a step 13 of the bearing ring 6. However, this shoulder 20 does not form a groove for receipt of snap catches as is claimed by Applicants. The step 13 abuts the rebounding shoulder 20 of the bone screw to limit the insertion depth of the bone screw 1 into the bone. The step 13 and shoulder 20 do not interact to secure the bone screw in the bearing ring 6.

Accordingly, Eckhof does not disclose or remotely suggest the use of a bone screw that has a circumferential groove located on a top portion of the screw below a screw head for receipt of the snap catches, as claimed by Applicants.

The structure of Eckhof is far removed from that of Applicants' claimed invention. Compared to Applicants' claimed invention, with the device of Eckhof it is necessary to use an additional part, namely the bearing ring 6. The bone plate 3, which may be seen as a clamping

element, does not function to retain or secure the bone screw 1 in the axial direction. Rather, the securing of the bone screw is achieved in Eckhof through the use of the bearing ring 6, which is inserted into an opening 2 of the bone plate 3. The bearing ring 6 uses an annular groove 16 to accommodate the circumferential ridge 21 of the bone screw 1 in order to retain the bone screw therein, and uses a step 13 to abut the rebounding shoulder 20 of the bone screw to limit the insertion depth of the bone screw 1 into the bone.

The overall design of Eckhof is an annular design, using a circumferential rib 21 of the bone screw 1 engaging into an annular groove 16 of the bearing ring 6 to secure the bone screw 1. In contrast, the present invention uses at least two snap catches which are spaced apart around an edge of the screw hole of the clamping element and protrude from the clamping element. As discussed above, there are no protrusions from the bone contacting surface of the bone plate 3 or bearing ring 6 of Eckhof.

As the structure of Eckhof is very different than that claimed by Applicant, Eckhof cannot disclose or remotely suggest the step of screwing the bone screw into the bone segment through the screw hole of the positioned clamping element in an axial direction until the snap catches interlock with the groove of the bone screw to secure the bone screw to the clamping element, where the clamping element has at least two snap catches protruding from a bone-contacting surface of the clamping element and spaced around an edge of a screw hole and where the bone screw has a circumferential groove located on a top portion thereof below a screw head, for receipt of the snap catches.

As Eckhof does not disclose each and every element of the invention as claimed, the rejections under 35 U.S.C. § 102(b) are believed to be improper, and withdrawal of the rejections is respectfully requested. See, *Akamai Technologies Inc., supra*.

Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious to one skilled in the art in view of Eckhof, taken alone or in combination with any of the other prior art of record.

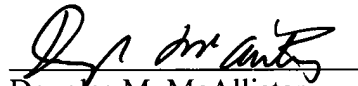
Withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) are respectfully requested.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,


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